

Garmin 702.277 (AT 20972-00025)
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Beesley et al. :
: Art Unit: 3661
Serial No.: Not Assigned :
: Examiner: Arthur Jeanglaude, Gertrude
Filed: :
: :
For: System and Method for Estimating :
Impedance Time Through a Road
Network

**DECLARATION OF PRIOR INVENTION IN THE UNITED STATES TO OVERCOME
CITED REFERENCE (37 C.F.R. §1.131)**

Hon. Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PURPOSE OF THIS DECLARATION

We, Darin J. Beesley, and Michael Childs, declare that:

1. We are engineers employed with Garmin International, Inc., a wholly-owned subsidiary of the assignee of the present invention, Garmin, Ltd. (hereafter "Garmin").
2. We have reviewed and understand the patent application Serial No. TBD titled "System and Method for Estimating Impedance Time Through a Road Network" (hereafter "Subject Application"), including the specification, abstract, drawings and claims therefor.

3. The Subject Application was filed on September 8, 2003 and claims the priority of an application having serial number 10/015,152, filed December 11, 2001 (hereafter "Patent Application"). The Subject Application is a continuation application of the Parent Application.
4. We are joint inventors of the invention(s) recited in the claims of the Subject Application (hereafter "Claimed Invention").
5. We have reviewed U.S. Patent No. 6,263,277 B1 to Tanimoto et al. filed on August 7, 2000 and issued on July 17, 2001 (hereafter "Antedated Reference"), which on information and belief, was being relied on in at least one rejection of the claims in the Parent Application of the Subject Application.
6. We conceived and reduced to practice the Claimed Invention of the Subject Application in the United States before August 7, 2000 which is the earliest filing date of the Antedated Reference.

FACTS AND DOCUMENTARY EVIDENCE

7. We work as engineers within design and development teams of Garmin.
8. Our responsibilities include, among other things, the design and development of new software algorithms and features for implementation on new products and as part of upgrades to existing products.
9. It is Garmin's practice to maintain software change logs that document changes made to software during development.
10. The software change logs identify changes that are made to a particular revision of software, including the date upon which a change is entered.

11. Throughout the first three quarters of 2000, the joint inventors met extensively to discuss routing algorithms used to calculate paths and distances between nodes and geographic locations.
12. When authoring software, each time we update software modules or add new software modules, it is Garmin's standard practice to update the software change log associated with a particular revision of software, adding appropriate comments when substantive changes are made.
13. The attached document (Attachment A) constitutes a printout of a portion of a software change log (hereafter "Change Log") for a software module named MDB_rte.
14. The Change Log documents changes made to the MDB_rte module after the initial version of the source code has been written.
15. Changes to the module MDB_rte documented in the Change Log originated on March 23, 2000 and includes changes made through August 4, 2000.
16. The entries in the Change Log provide a revision number, a short description of changes made to module MDB_rte in the revision, the date and time of the revision, and who programmed the revision.
17. The Change Log is primarily maintained by the undersigned.
18. Some changes to the module MDB_rte have been entered and logged in the Change Log by other Garmin developers, but such changes are not within the scope of the Subject Application.
19. The Change Log references several entries between March 23, 2000 and August 4, 2000, including among others the addition of a node traversal cost calculation for simulating stop lights at major intersections (entry 29 on May 19, 2000), and making

a node transversal cost calculation incorporate relative routing levels in addition to relative speed categories (entry 55 on July 14, 2000).

CONCEPTION AND REDUCTION TO PRACTICE

20. As is apparent from the above mentioned entries from the Change Log, at least as of July 14, 2000, the subject matter claimed in the subject application was reduced to practice including, at least, provisions for node traversal cost calculation for simulating stop lights at major intersections and a node transversal cost calculation incorporating relative routing levels in addition to relative speed categories.
21. Other entries in the Change Log that further illustrate the reduction to practice of the claimed invention prior to August 7, 2000 include entries 5, 6, 9, 10, 11, 24, 30, 32, 34, 39, 40, 41, 47, 54, and 56, which represent the following:
- a) Entry 5 describes an adjustment to a turn cost calculation.
 - b) Entry 6 describes a further adjustment to a turn cost calculation.
 - c) Entry 9 describes routing to avoid highways and adding costs to toll booths and gates.
 - d) Entry 10 describes an adjustment to speeds for speed categories and turn costs.
 - e) Entry 11 describes an adjustment to speed categories and layer switching thresholds.
 - f) Entry 24 describes including restriction costs when picking a best routing solution.
 - g) Entry 30 describes modifying node transversal costs based on speed category of a cross street.
 - h) Entry 32 describes taking highway and toll road avoidance costs into account when picking a best route.
 - i) Entry 34 describes adjusting toll booth and gate costs plus including node traversal time in route travel time.
 - j) Entry 39 describes an adjustment to calculation of route costs.

- k) Entry 40 describes including travel costs from starting position to first node.
- l) Entry 41 describes an adjustment to include node traversal cost in a reverse direction.
- m) Entry 47 describes an adjustment adding cost to through-traffic restricted adjacencies.
- n) Entry 54 describes an adjustment to route initialization.
- o) Entry 56 describes an adjustment to node transversal parameters.

22. In view of the foregoing, it is believed that the invention claimed in the Subject Application were conceived and reduced to practice prior to August 7, 2000 which is a date earlier than the effective date of the Antedated Patent.

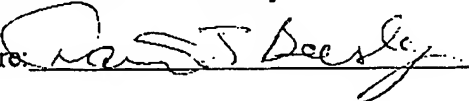
DECLARATION

23. As a person signing below, I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application and any patent issued thereon.

SIGNATURES

INVENTORS

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Attached and Made A Part Hereof: Attachment A: Software Change Log for module MDB_rte